



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Hideaki KOBAYASHI et al.

Group Art Unit: 1794

Application No.: 10/505,147

Examiner: C. PADEN

Filed: August 20, 2004

Docket No.: 120822

For: CONTAINER-PACKED, OIL-IN-WATER TYPE EMULSIFIED FOOD
PRODUCT AND METHOD FOR MANUFACTURE THEREOF

DECLARATION UNDER 37 C.F.R. §1.132

We, Masahiro ARIIZUMI and Hajime MATSUDA, each a citizen of Japan, hereby
declare and state:

1. I, Masahiro ARIIZUMI, have a master's degree in Engineering which was
conferred upon me by Yamanashi University in Japan in 1995, I have been employed by Q.P.
Corporation since 1995, and I have had a total of 14 years of work and research experience in
the field of food technology.

2. I, Hajime MATSUDA, have a master's degree in Agriculture which was
conferred upon me by Tohoku University in Japan in 2001, I have been employed by Q.P.
Corporation since 2001, and I have had a total of 8 years of work and research experience in
the field of food chemistry.

3. We are named inventors in the above-captioned patent application.

4. We and/or those under one or both of our direct supervision and control have
conducted the following tests:

A bubbled, oil-in-water emulsified food product was prepared as disclosed in Example 1 of JP 2000-210048 to Toru et al. ("Toru"), except that the preparation method of Example 1 of Toru was modified by the following modifications (A)-(C):

(A) The total amount of food product prepared was scaled down from 100 kg to 5 kg, i.e. 1/20 scale;

(B) The food product preparation was bubbled with nitrogen gas at a rate of three (3) liters per minute, which is twice the water-phase volume per minute and more than sufficient for conducting nitrogen gas bubbling in accordance with Example 1 of Toru, because Toru does not disclose a bubbling rate in Example 1; and

(C) The headspace of the container was nitrogen purged while the headspace of the container described in Example 1 of Toru was not nitrogen purged.

The starting materials and amounts for the food product according to Example 1 of Toru are shown in TABLE 1 below.

TABLE 1

Phases	Materials	Blending amounts
Oil-phase	Salad oil	3500g
Water-phase	Egg yolk liquid ^{*1}	500g
	Fresh egg-white	225g
	Vinegar	225g
	Table salt	90g
	Superfine sugar	85g
	Mustard powder	25g
	Pure water	350g
Total		5000g

^{*1}Egg yolk liquid: About 30 percent by weight of egg yolk lipoprotein is egg yolk lipophospho-lipoprotein.

The bubbled, oil-in-water emulsified food product was prepared as follows in accordance with Example 1 of Toru.

First, all water-phase starting materials were introduced into a mixer while stirring and the mixed solution was stirred at 2000 rpm for one (1) minute while bubbling

with nitrogen gas at a bubbling rate of three (3) liters per minute to obtain a uniformly mixed solution.

Second, salad oil was slowly added to the uniformly mixed solution for four (4) minutes with continuous stirring and nitrogen bubbling of the uniformly mixed solution. After the salad oil was added, the mixture was stirred for an additional one (1) minute at 5000 rpm with continuous nitrogen bubbling, thereby roughly emulsifying the mixture.

Third, the bubbled, roughly emulsified mixture was passed directly through a colloidal mill so as to carry out a finishing emulsification, thereby obtaining a bubbled, oil-in-water emulsified food product.

Fourth, a 300 ml container was filled with this bubbled, oil-in-water emulsified food product.

Fifth, a headspace of the container was nitrogen purged and the container was sealed. The containers used in these experiments were the same as those used in Working Example 3 of the specification, discussed beginning at page 26, line 23. They were manufactured by a blow molding method that comprises laminating five (5) layers of polyethylene and ethylene-vinyl alcohol copolymer resin. The containers have an average oxygen permeability of about $30 \text{ cc/m}^2 \cdot \text{day} \cdot \text{atm}$.

The dissolved oxygen concentrations of three (3) samples prepared as described above were measured using a fluorescent oxygen concentration meter (described as Measurement Method 2 in the specification, beginning at page 15, line 3). The dissolved oxygen concentrations would be expected to have greater values if measured with a polarograph-type oxygen concentration meter (described as Measurement Method 1 in the specification, beginning at page 13, line 14).

Average dissolved oxygen concentrations for the three samples (3) were calculated and are shown in TABLE 2 below.

TABLE 2

	Immediately after manufacturing	After 1 day	After 4 days	After 10 days
Dissolved oxygen (% O ₂)	17.3	16.5	15.0	9.5

5. As shown in Table 2, the bubbled, oil-in-water emulsified food product prepared according to Example 1 of Toru in which more than sufficient nitrogen bubbling was applied to the water-phase starting materials, even with the modification that the head space of the container was nitrogen purged, has a dissolved oxygen concentration greater than 7.1 % O₂ immediately after manufacturing (including one (1) day after manufacturing), as well as four (4) and ten (10) days after manufacturing.

I, each of the undersigned, hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and/or imprisonment under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing therefrom.

Date: Sep. 14, 2009

Masahiro Ariizumi
Masahiro ARIIZUMI

Date: Sep. 14, 2009

Hajime Matsuda
Hajime MATSUDA